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Video Lecture 1: Sampling and Data

This video lecture is designed as a supplement to the Sampling and Data chapter of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to recognize and differentiate between key terms in statistics, apply various types of sampling methods to data collections, and create and interpret frequency tables.

<https://www.youtube.com/embed/viXNnZO8X9k>

Video Lecture 2: Descriptive Statistics

This video lecture is designed as a supplement to the Descriptive Statistics chapter of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to display data graphically and interpret graphs; recognize, describe and calculate the measures of location of data such as quartiles and percentiles; recognize, describe, and calculate the measures of the center of data; and recognize, describe, and calculate the measures of the spread of data.

https://www.youtube.com/embed/X_VJfdMTpLI

Video Lecture 3: Probability Topics

This video lecture is designed as a supplement to the Probability Topics chapter of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to understand and use the terminology of probability; determine whether two events are mutually exclusive or independent; calculate probabilities using the Addition Rules and Multiplication Rules; and construct and interpret Contingency Tables, Venn Diagrams, and Tree Diagrams.

<https://www.youtube.com/embed/fpLlgdWfcE0>

Video Lecture 4: Discrete Distributions

This video lecture is designed as a supplement to the Discrete Distributions of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to recognize and understand discrete probability distribution functions; calculate and interpret expected values; recognize and apply the binomial probability distribution, the Poisson probability distribution, the geometric probability distribution, and the hypergeometric probability distribution; and classify discrete word problems by their distributions.

https://www.youtube.com/embed/vy_eY1H_D0U

Video Lecture 5: Continuous Random Variables

This video lecture is designed as a supplement to the Continuous Random Variables chapter of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to recognize and understand continuous probability distribution functions in general; recognize the uniform probability distribution and apply it appropriately; and recognize the exponential probability distribution and apply it appropriately.

<https://www.youtube.com/embed/R944AGlpPog>

Video Lecture 6: The Normal Distribution

This video lecture is designed as a supplement to the Normal Distribution chapter of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to recognize the normal probability distribution and the standard normal probability distribution and apply each appropriately, and compare normal probabilities by converting to the standard normal distribution.

<https://www.youtube.com/embed/OqorvQXzemY>

Video Lecture 7: The Central Limit Theorem

This video lecture is designed as a supplement to the Central Limit Theorem chapter of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to recognize the Central Limit Theorem problems; classify continuous word problems by their distributions, and apply and interpret the Central Limit Theorem for Averages and the Central Limit Theorem for Sums.

<https://www.youtube.com/embed/qZFdyprWLN0>

Video Lecture 8: Confidence Intervals

This video lecture is designed as a supplement to the Confidence Intervals chapter of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to calculate and interpret confidence intervals for one populations average and one population proportion; interpret the student-t probability distribution as the sample size changes; and discriminate between problems applying the normal and then student-t distributions.

<https://www.youtube.com/embed/Gybpz9GdxAU>

Video Lecture 9: Hypothesis Testing with a Single Mean

This video lecture is designed as a supplement to the Hypothesis Testing: Single Mean and Single Proportion chapter of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to differentiate between Type I and Type II Errors; describe hypothesis testing in general and in practice; and conduct and interpret hypothesis tests for single population means, known and unknown population standard deviation, and also proportions.

Note: A captioned version of this video is currently unavailable. This will be updated shortly.

https://www.youtube.com/embed/gpL0mAZ_JfE

Video Lecture 10: Hypothesis Testing with Two Means

This video lecture is designed as a supplement to the Hypothesis Testing: Two Means, Two Populations, Paired Data chapter of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to classify hypothesis tests by type; conduct and interpret hypothesis tests for two population means with standard deviations that are both known and unknown; conduct and interpret hypothesis tests for two population proportions; and conduct and interpret hypothesis tests for matched or paired samples.

<https://www.youtube.com/embed/KSgDoWWZevU>

Video Lecture 11: The Chi-Square Distribution

This video lecture is designed as a supplement to the Chi-Square Distribution chapter of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to interpret the chi-square probability distribution as the sample size changes; conduct and interpret chi-square goodness-of-fit hypothesis tests; conduct and interpret chi-square test of independence tests; and conduct and interpret chi-square single variance hypothesis tests.

<https://www.youtube.com/embed/S5jbIw0SI2s>

Video Lecture 12: Linear Regression and Correlation

This video lecture is designed as a supplement to the Linear Regression and Correlation chapter of Collaborative Statistics (col10522) by Barbara Illowsky and Susan Dean. In this chapter, students can expect to learn how to discuss basic ideas of linear regression and correlation; create and interpret a line of best fit; and calculate and interpret the correlation coefficient and outliers.

<https://www.youtube.com/embed/hbKcpJaPknI>